

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P390405

Luminaire Tested: **22CZ2-50VHE-HRP-UNV-L930-CD1-SDWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P390405  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-50VHE-HRP-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3481.5 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

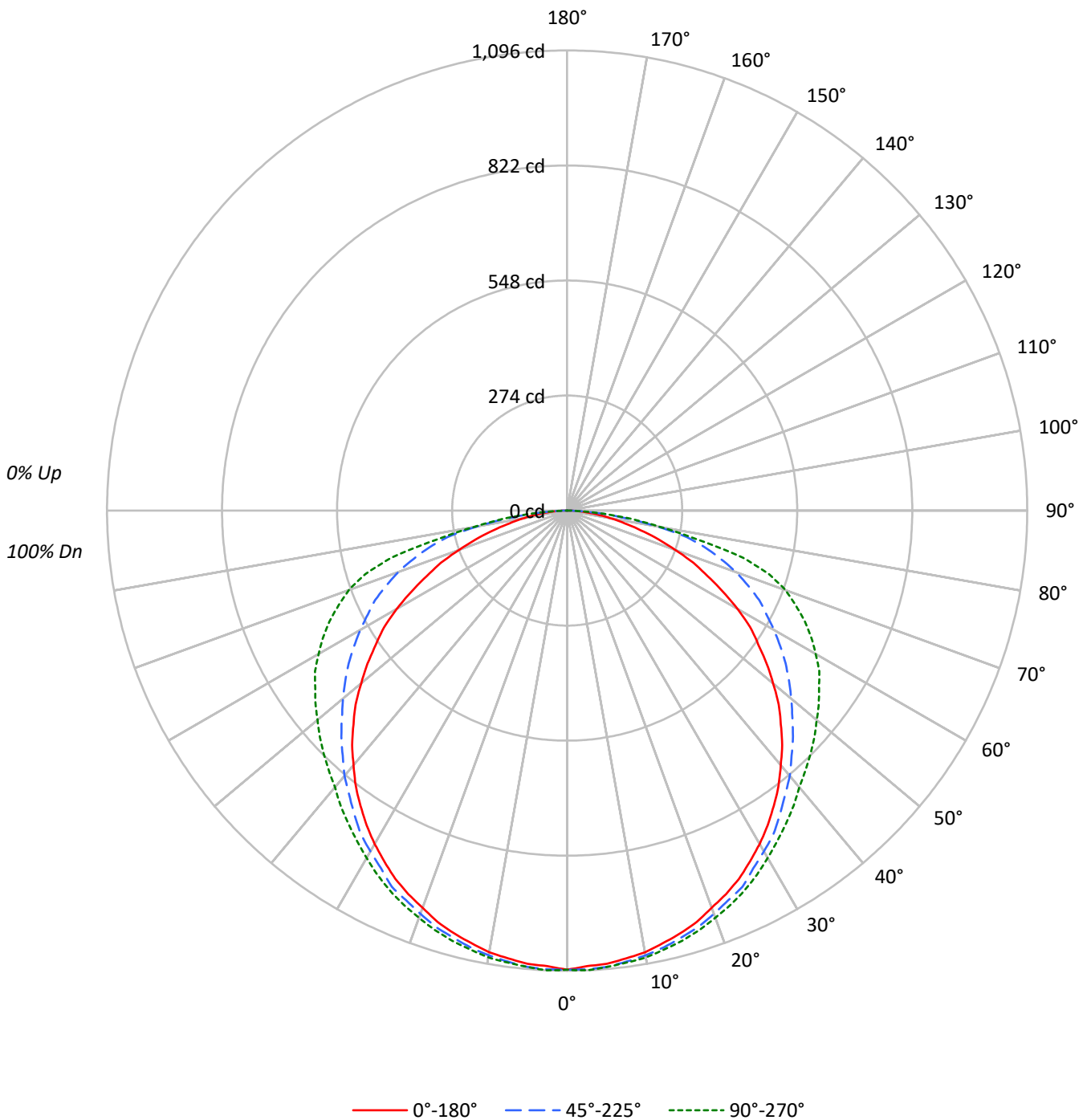
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2943	2943	2943
5°	2927	2947	2947
10°	2918	2939	2953
15°	2904	2932	2954
20°	2882	2926	2956
25°	2874	2935	2966
30°	2849	2913	2968
35°	2819	2903	2987
40°	2780	2897	3023
45°	2739	2895	3119
50°	2681	2916	3249
55°	2608	2980	3437
60°	2523	3060	3680
65°	2348	3212	3979
70°	2156	3365	4353
75°	1890	3541	4500
80°	1627	3374	3532
85°	1423	2452	2689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.4	3.0
10°-20°	297.0	8.5
20°-30°	453.2	13.0
30°-40°	553.3	15.9
40°-50°	591.6	17.0
50°-60°	571.0	16.4
60°-70°	491.6	14.1
70°-80°	332.6	9.6
80°-90°	87.8	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	853.6	24.5
0°-40°	1406.9	40.4
0°-60°	2569.6	73.8
0°-90°	3481.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3481.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1083	1086	1091	1091	1091	103
15°	1042	1045	1053	1058	1060	294
25°	968	973	989	994	999	446
35°	858	866	884	902	909	537
45°	720	732	761	799	820	556
55°	556	574	635	699	732	498
65°	369	405	504	584	625	367
75°	182	241	341	410	433	195
85°	46	64	79	82	87	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1093.6	1093.6	1093.6	1093.6	1093.6
2.5°	1085.9	1088.5	1093.6	1093.6	1096.2
5°	1083.4	1085.9	1091.0	1091.0	1091.0
7.5°	1075.7	1078.2	1083.4	1085.9	1085.9
10°	1068.0	1070.5	1075.7	1078.2	1080.8
12.5°	1055.2	1057.7	1065.4	1070.5	1070.5
15°	1042.4	1044.9	1052.6	1057.7	1060.3
17.5°	1027.0	1032.1	1039.8	1044.9	1047.5
20°	1006.5	1011.6	1021.9	1029.6	1032.1
22.5°	988.6	993.7	1004.0	1011.6	1016.8
25°	968.1	973.2	988.6	993.7	998.8
27.5°	942.5	947.6	960.4	970.7	978.3
30°	916.9	922.0	937.4	950.2	955.3
32.5°	888.7	896.4	914.3	924.6	932.2
35°	858.0	865.7	883.6	901.5	909.2
37.5°	827.2	834.9	852.9	875.9	886.1
40°	791.4	801.6	824.7	855.4	860.5
42.5°	758.1	770.9	791.4	827.2	840.0
45°	719.7	732.5	760.7	799.1	819.6
47.5°	683.8	696.6	727.4	773.5	799.1
50°	640.3	658.2	696.6	750.4	776.0
52.5°	599.3	614.7	665.9	724.8	755.5
55°	555.8	573.7	635.2	699.2	732.5
57.5°	517.3	532.7	601.9	673.6	712.0
60°	468.7	489.2	568.6	645.4	683.8
62.5°	417.5	448.2	535.3	614.7	655.6
65°	368.8	404.7	504.5	583.9	624.9
67.5°	325.3	363.7	466.1	550.6	589.1
70°	274.0	322.7	427.7	509.7	553.2
72.5°	227.9	281.7	384.2	466.1	504.5
75°	181.8	240.7	340.6	409.8	432.8
77.5°	140.9	197.2	292.0	312.5	315.0
80°	105.0	156.2	217.7	220.3	227.9
82.5°	71.7	110.1	140.9	153.7	156.2
85°	46.1	64.0	79.4	82.0	87.1
87.5°	20.5	23.1	28.2	25.6	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)